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First record and range extension of *Ceriomydas crassipes* (Westwood, 1841) (Insecta, Diptera, Mydidae) from Rio Grande do Sul, Brazil

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Abstract: Here we provide the first record of *Ceriomydas crassipes* (Westwood, 1841) from the state of Rio Grande do Sul, Brazil. Previously, this species was recorded only in the southeastern Brazilian states of São Paulo, Rio de Janeiro, Minas Gerais and Espírito Santo. Therefore, this record extends the range of *C. crassipes* further south to include the southernmost state of Brazil.

Key words: conservation units, diversity, Neotropical region, pampa

Mydidae is a family of medium to very large, elongate flies, ranging from 6 to 60 mm. These flies are sparsely pilose and often resemble wasps. One of its species—*Gauromydas heros* (Perty, 1833)—is considered to be the largest known dipteran species. Despite the incredible size some species can reach, in number, Mydidae is one of the smaller families of the order Diptera, with around 471 species currently described worldwide in 66 genera, of which 73 occur in the Neotropical Region and 24 are found in Brazil (Carvalho et al. 2012).

Species belonging to the family Mydidae are found in areas with warm climates. Thus, they are more diverse in the Afrotropical Region, especially in Namibia and western South Africa (Lyons and Dikow 2010). In Brazil, the family is widely distributed across the country. However, little is known about the biology of Mydidae, particularly the Neotropical species, because specimens are seldom collected due to their short annual activity period.

The larvae of certain Nearctic species of Mydidae are known to prey on the immatures of species of Coleoptera, while some South American species have been shown to use the nests of ants (*Acromyrmex* spp. and *Atta* spp.) during their development period (Zikan 1942). It is not known whether the larvae of the South American species feed on the debris left in the ants' nests or on the coleopteran larvae that cohabit the nests, but the latter is more likely to be true (Papavero and Artigas 2009).

The genus *Ceriomydas* Williston, 1898 belongs to the subfamily Mydinae and has four species assigned to it (Wilcox et al. 1989),of which three are found in Brazil: *C. crassipes* (Westwood, 1841); *C. fraudulentus* Williston, 1898; and *C. vespoides* Papavero & Wilcox, 1974.

As in all species of *Ceriomydas*, *C. crassipes* resembles a wasp. According to Papavero and Wilcox (1974), this species resembles the solitary wasp of the genus *Montezumia* Saussure 1852 (Hymenoptera, Eumenidae).

In 1841, Westwood's original description of the species was labeled as, "?America septentrionalis," which is evidently an error (Papavero 2009). This species was previously recorded in the Brazilian states of Rio de Janeiro, São Paulo, Minas Gerais and Espírito Santo (Papavero and Wilcox 1974; Papavero 2009; Calhau 2013).

A female specimen of *C. crassipes* (Westwood, 1841) (Figure 1) was found while sorting material from Malaise traps issued by a project aiming to determine the Diptera fauna from the coastal plains of Rio Grande do Sul in Brazil. The specimen was collected in the conservation area, Parque Estadual do Itapuã, located in the municipality of Viamão, approximately 57 km from the city of Porto Alegre and 60 km from the Atlantic Ocean. Secretaria Estadual do Meio Ambiente (SEMA) do Rio Grande do Sul granted the collecting permit for this park.

The park has an area of 5,566 ha and is located in the transition zone between the tropical forests of the Brazilian–Guianean subregion and the temperate Andean–Patagonic subregion. Open formations such as the "Pampa" and the coastal plains on the east with small isolated lakes and restinga forests surround the park (Menegat et al. 1998). According to the Köppen system, the climate in the region is subtropical humid (Cfa), and the landscape varies with different geological formations (sandbanks, granitic hills, and beaches).

Figure 1. Right habitus of female *Ceriomydas crassipes* (Westwood, 1841) (Diptera, Mydidae) from Rio Grande do Sul state, Brazil.

The specimen was collected using a Malaise trap placed in the internal sand dunes of the park (30.38291° S, 051.03008° W) (Figure 2), which was running from 15–22 January 2012. The specimen was identified using the key by Papavero and Wilcox (1974), and confirmed by Dr. Júlia Calhau Almeida. The specimen is deposited in the entomological collection of the Laboratório de Ecologia de Parasitos e Vetores (COLEPAV) of the Federal University of Pelotas, Rio Grande do Sul, Brazil.

The specimen collected from the Parque Estadual do Itapuã represents the first record of *C. crassipes* in the state of Rio Grande do Sul, which extends its distribution to its most southern point, about 900 km south from the previous southernmost record.

Figure 2. Map of southeast Brazil showing the distribution of *Ceriomydas crassipes*. The black dots represent the localities found in the literature. The red star indicates the new occurrence found in Rio Grande do Sul, Brazil.

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RFK collected the specimen and JLPD identified it. JLPD wrote the text and RFK helped improving it. JLPD built the maps.

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